

which is a lasidium. In *Spatha* there are no, or hardly any, hinge teeth, and they are surely *not* taxodont. The embryo is unknown to me. Yet the above characters of the soft parts fully justify the separation of this genus from the North American *Unionidæ*, and I do not hesitate to affirm, that *Spatha* should stand in a different family, which may be called *Mutelidæ*, if the genus *Mutela* should prove to be allied in the structure of the soft parts. Whether the other genera placed by Simpson in this association actually belong here, remains to be investigated.

DESCRIPTION OF A NEW SPECIES OF TRUNCILLA.

BY BRYANT WALKER.

TRUNCILLA LEWISII n. sp. Pl. III, figs. 3, 4, 5.

Male shell quadrate, subcompressed; thick, solid; dark reddish-yellow, with faint, radiating lines of green; beaks laterally compressed, eroded, but apparently only slightly elevated above the hinge-line, sculpture not seen; anterior end regularly rounded, forming an obtuse angle at its junction with the basal emargination, which is nearly straight; dorsal line curved; posterior end slightly emarginate and terminating in a broad biangulation, which projects slightly beyond the posterior and basal lines; a broad, flat groove extends from the beaks to the basal emargination, widening and deepening as it approaches the base; posterior ridge prominent, rounded towards the beak, but becoming flattened and obsoletely biangulated as it approaches the posterior end; immediately in front of the median groove, there is a strong anterior ridge, which becomes more pronounced as it approaches the base, where it terminates in the angle at the anterior end of the basal emargination, it is more or less roughened by the accentuation of the lines of growth, which elsewhere on the disk are not very strongly developed; dorsal slope concave behind the posterior ridge; interdium rather long, narrow, rounded and parallel with the hinge; pseudo-cardinals in the left valve, two, the anterior very narrow, straight, directed obliquely forwards and slightly widening towards the anterior end, the posterior triangular, the space between them triangular and extending to the hinge; in the right valve, two, the anterior smaller, but well developed, the posterior long, triangular, the space between them

narrow, direct and extending to the hinge-line, the posterior tooth is separated from the interdendum by a deep groove; lateral teeth bent obliquely downward from the hinge-line, two in the left valve and one in the right, large and nearly straight; anterior adductor impressions large and deep, those of the protractor-pedis well marked, rather long and narrow, below and slightly behind the adductor; anterior retractor impressions small and on the base of the pseudo-cardinal; posterior adductor impressions large, semicircular; those of the posterior retractors small, but well impressed, above that of the adductor and immediately below the end of the lateral tooth; cavity of the beaks shallow; nacre white.

The female shell is thinner than that of the male and proportionately wider, the posterior ridge being more oblique and more extended; the posterior line is straight or slightly curved, without the emargination noted in the male; the anterior ridge is greatly produced beyond the basal line in a triangular prolongation and this, the marsupial expansion, is of a different texture from the rest of the shell, being thin and dark green as in *T. capsæformis*; between this expansion and the posterior ridge, the base is deeply emarginate.

Length (male) 43; height 37; diam. $22\frac{1}{2}$ mm.

Length (female) 51; height $49\frac{1}{2}$; diam. 25 mm.

Types (No. 15612 Coll. Walker), from the Holston River, Tenn. (ex Lewis Coll.). Also from the Clinch River, Tenn. (Lewis); Cumberland River, Port Burnside, Ky. (Wetherby) and the Holston River, Knox Co., Tenn. (Andrews).

This species, while closely related to *T. foliata* Hild., to which it was referred by the original collectors, is clearly distinct. *Foliata* is a much larger and heavier species and is apparently confined to the Ohio and Wabash rivers, while *lewisii* is restricted to the Cumberland and Tennessee drainage systems, and from all the localities given above is remarkably consistent in its peculiar features. Besides being uniformly smaller, more delicate and smoother than *foliata*, it is specially characterized by the difference in the marsupial expansion, which is triangular and comparatively narrow at the extremity and of a different texture from the body of the shell. In *foliata*, this expansion is broadly rounded and is of the same texture as the remainder of the valve.

It is named in memory of the late Dr. James Lewis, of Mohawk, N. Y. (whose collection has furnished the types), who was a con-

chologist far in advance of his contemporaries and through whose endeavors, a very large part of the fauna of Eastern Tennessee was first made known.

SHELL COLLECTING IN PUGET SOUND AND ALASKA.

BY DR. FRED BAKER, SAN DIEGO, CAL.

(Concluded from p. 31.)

- Turbonilla (Strioturbonilla) vancouverensis Baird. Orcas Island.
 Odostomia (Evalea) cookeana Bartsch. sp. nov. Ellamar.
 Odostomia (Evalea) amchitkana D. & B. Ellamar.
 Odostomia (Amaura) avellana Cpr. Shore, Orcas Island.
 Odostomia (Evalea) deliciosa D. & B. Ballard Beach.
 Odostomia (Evalea) inflata Cpr. Orcas Island.
 Odostomia (Evalea) valdezi D. & B. Orcas Island.
 Littorina groenlandica Mörch. Seward.
 Littorina scutulata Gld. All points visited except Port Graham.
 Littorina sitchana Phil. All points visited.
 Lacuna porrecta Cpr. Orcas Island, Sucia Island.
 Lacuna solidula Lovén. Ellamar.
 Lacuna vincta Mtg. Ballard Beach, shore Orcas Island, Ellamar.
 Bittium (Stylidium) eschrichtii Midd. Dredged and on shore, Orcas Island.
 Alvania bakeri Bartsch. sp. nov. Port Graham.
 Onoba asser Bartsch. sp. nov. Port Graham.
 Mölleria quadræ Dall. Port Graham.
 Calliostoma annulatum Mart. Orcas Island, rather common.
 Calliostoma costatum Mart. Dredged and on shore Sucia and Orcas Island.
 Calliostoma variegatum Cpr. Orcas Island, 4 fine live specimens.
 Margarites albulus Gld. Port Graham.
 Margarites lirulatus Cpr. Shore, Orcas Island.
 Margarites pupilla Gld. Ballard Beach, dredged and on shore, Orcas Island.
 Leptogyra alaskana Bartsch. sp. nov. Port Graham.
 Haliotis kamtschatkana Jonas. Near Ketchikan, Alaska. (Purchased.)
 Puncturella cooperi Cpr. Orcas Island.